

INDEX

- ABDOMINAL** viscera, thermo-electric temperature studies of, 72.
- ABRAMSON, H. A. See DANIEL and ABRAMSON, 28.
- Absorption of fluid from intestine, 434.
- rates, relative, of dextrose and levulose, 565.
- Accelerator fibers in vagus of dog, 274.
- ACKERMAN, W. See KATZ and ACKERMAN, 62.
- Action potentials from single muscle fibers, 678.
- ADOLPH, E. F., M. J. GERBASI AND M. J. LEPORE. Redistributions of water measured in blood and tissues, 1.
- Adrenal cortex, hormone of, 46.
- extract, cortical, effect of, in normal animals, 13.
- — —, effect of, on blood cellular elements, 23.
- — —, in-vitro effects of, 94.
- glands, principal function of, 14.
- Adrenalectomy in cats, 13.
- Adrenalin, depressor responses of, in rat, 282.
- Adrenals, effect of removal of, on body temperature, 74.
- Adrenin, internal and external stimulation of the iris by, 90.
- , mode of action of, 89, 149.
- , quantitation of, by biological methods, 149.
- Albuminuria following exercise, 53, 357, 365.
- Alcohol, hydroxy-benzyl, action of some derivatives of, 70.
- Alcohols, aliphatic, toxicity of, 71.
- ALLEN, F. M. Artificial hyperinsulism, 2.
- ALLEN, W. M. See REYNOLDS and ALLEN, 86.
- ALLEY, A. See BABKIN, STAVRAKY and ALLEY, 2.
- American Physiological Society, proceedings, 1.
- Anemia development in young rats, 503.
- , pernicious, etiology of, 59.
- ANGEVINE, M. See LANDIS, JONES, ANGEVINE AND ERB, 67.
- Anoxemia, relationship of, to acidity of brain tissue, 66.
- , two stages in, 54.
- ARNY, F. P. See GREISHEIMER and ARNY, 45.
- Arteriosclerosis, hemodynamics of, 33, 376.
- ASHCRAFT, D. W. The effects of feeding varied rations upon the hydrogen ion concentration of the intestinal contents of the domestic fowl, 2.
- AUSTIN, J. H. See RAVDIN, JOHNSTON, RIEGEL, AUSTIN AND WRIGHT, 86.
- Autosynthetic cells, 26.
- Axon, spike potential of, 316.
- B**ABKIN, B. P., G. W. STAVRAKY and A. ALLEY. Humoral transmission of chorda tympani hormone, 2.
- BALDES, E. J., J. F. HERRICK and H. E. ESSEX. The effect of lumbar sympathectomy on the flow of blood in the femoral artery of the dog, 3.
- See HERRICK, ESSEX and BALDES, 213.
- BANUS, M. G. and E. GINSBURG. Changes in the blood associated with fever induced by killed *B. coli*, 106.
- BARD, P., C. M. BROOKS and T. LOWRY. Cerebral localization of "hopping" and "placing" reactions in cats, rats and alligators, 3.
- BARNES, B. O. The excretion of iodine in experimental hyperthyroidism, 4.
- The physiological activity of iodine in thyroglobulin, 583.
- See MATHIEU and BARNES, 75.

- BARRON, L. See FETTER, BARRON and CARLSON, 605.
- BARRY, F. S. The rôle of water and chlorides in the production of edema in nephrectomized dogs, 5.
- BARTLEY, S. H. Analysis of the cortical response to stimulation of the optic nerve, 4.
- BAZETT, H. C. Further experiments on chronic decerebrate cats, 5.
- The determination in man of end systolic, lateral systolic, diastolic and diasystolic pressures by a modified Riva Rocci method, 5.
- See LAPLACE and BAZETT, 68.
- BEAN, J. W. and J. HALDI. Alterations in blood lactic acid as a result of exposure to high pressures of oxygen, 6.
- BENEDICT, F. G. See RIDDLE, NUSSMANN and BENEDICT, 251.
- See RIDDLE, SMITH and BENEDICT, 88, 260.
- BERNTHAL, T. G. Changes in volume flow of blood resulting from chemical stimulation of the carotid sinus, 6.
- BEST, C. H., J. M. HERSHEY and M. E. HUNTSMAN. The control of the deposition of liver fat, 7.
- BEUTNER, R. and M. CAPLAN. The formation of free HCl from NaCl in the stomach and in vitro, 8.
- BISHOP, G. H. Certain time-relations of the visual pathway, 8.
- See GELFAN and BISHOP, 37, 678.
- BLACK, J. A. See MACHT and BLACK, 71.
- BLAIR, E. A. and J. ERLANGER. On the effects of polarization of nerve fibers by extrinsic action potentials, 9, 559.
- Blood and gastric juice, osmotic relations of, 42.
- and intestinal lumen, passage of urea between, 391.
- and muscle sugar, effect of epinephrine on exchange of, 95.
- changes in bacterial fever, 106.
- chemistry, variations of, in men and women, 45.
- circulation in fetal rat, 24.
- constituents, effect of pituitary extracts on, 711.
- Blood and gastric juice, distribution of sugar between corpuscles and plasma, 16.
- flow affected by chemical stimulation of carotid sinus, 6.
- —, effect of sympathectomy on, 3, 213.
- — in relation to muscle tension, 68.
- glycolysis, effect of arsenate on, 77.
- lactic acid under high oxygen pressure, 6.
- of anesthetized dogs, effect of high frequency current on, 203.
- of rats, sex hormone in, 246.
- , passage of substances from, to lymph, 232.
- pressure determinations, effect of partial and complete arterial occlusion on, 72.
- —, indirect and direct, in dogs, 68.
- —, influence of carbon arc radiation on, 68.
- — in man, 5.
- — —, direct intra-arterial, 140.
- serum and corpuscles, freezing point of, 21.
- — and lacteal lymph, proteins in, 421.
- sugar, chronaxie and, 54.
- — in turtle, 11.
- velocity measurement, 70.
- volume in normal and Eck-fistula dogs after intravenous injection, 24.
- BODO, R. C., F. Co TUI and L. A. FARBBER. The relation of insulin to liver glycogen, 10.
- BOELL, E. J. and A. B. TAYLOR. The effect of carbamates on the electric potential of frog skin, 10.
- BOLDYREFF, E. B. and J. F. STEWART. Some observations on glycemia in turtles, 11.
- BOLDYREFF, W. N. See STEWART and BOLDYREFF, 96.
- BOLLMAN, J. L. and F. C. MANN. Lactic acid utilization following complete removal of the liver, 12.

- Bone, composition of, affected by acid feeding, 20.
 — formation, relation of, to blood elements, 23.
 —, regional analysis of, 83.
 BOOTHBY, W. M. See DUNN and BOOTHBY, 30.
 BOYD, T. E. Return of indirect excitability in curarized preparations, following tetanization of the motor nerve, 12.
 BOZLER, E. The analysis of the initial heat in smooth muscle, 13.
 Brain lesions, catalepsy due to, 690.
 Brain, respiratory quotient of, 446.
 — tissue, lactic acid formation in, 469.
 Breathing, chemical control of, 647.
 BRITTON, S. W. On the apparent principal function of the adrenal glands, 14.
 —. Seasonal differences in the survival of cats after adrenal removal, 13.
 — and H. SILVETTE. Effects produced by cortico-adrenal extract on normal animals, 13.
 —. See COREY and BRITTON, 23.
 —. See SILVETTE and BRITTON, 94.
 BROGDON, E. See HELLEBRANDT and BROGDON, 53.
 —. See HELLEBRANDT, BROGDON and KELSO, 365.
 BRONK, D. W. and G. STELLA. The response of end organs in the carotid sinus, 14.
 BROOKS, C. M. See BARD, BROOKS and LOWRY, 3.
 BROWN, D. E. S. and D. J. EDWARDS. A contracture phenomenon in cross-striated muscle, 15.
 BROWNELL, K. A. See HARTMAN, BROWNELL and LOCKWOOD, 50.
 BRYAN, W. R. See KING, GARREY and BRYAN, 64.
 BURGE, W. E. See ORTH and BURGE, 82.
 —. See VERDA, ORTH and BURGE, 100.
 BURGESS, J. P. See SACKS, IVY, BURGESS and VANDOLAH, 331.
 BURGET, G. E., P. MOORE and R. LLOYD. Is levulose converted to dextrose by the intestinal mucosa, 16.
 —, —, —. Is levulose converted to dextrose in the process of absorption from the intestine, 570.
 —, —, —. The relative absorption rates of dextrose and levulose, 565.
 BURROWS, W. H. See MARKOWITZ, YATER and BURROWS, 73.
 BUTLER, V. See GARREY and BUTLER, 37.
 CALCIUM absorption, 99.
 CALVIN, D. B. The distribution of sugar between corpuscles and plasma, 16.
 —. See ELLIS and CALVIN, 32.
 CANZANELLI, A. See RAPPORT and CANZANELLI, 85.
 Capillary, permeability of, in venous congestion, 67.
 CAPLAN, M. See BEUTNER and CAPLAN, 8.
 Carbohydrate changes in emotion, exercise and exposure to cold, 94.
 Carbohydrates, lipids and proteins, synthesis of, 75.
 CARLSON, A. J. See FETTER, BARRON and CARLSON, 605.
 —. See FETTER and CARLSON, 598.
 CARMICHAEL, E. B. and L. C. POSEY. A convenient pneumograph, 17.
 Carotid sinus, response of end organs in, 14.
 CARPENTER, R. and G. A. TALBERT. Magnesium secreted in the sweat and its relation to the calcium content, 17.
 Castration cells in anterior pituitary, 239.
 —, effect of, on anterior pituitary, 309.
 Catalepsy due to experimental brain lesions, 690.
 CATTELL, MCK. and E. SHORR. The recovery heat-production of mammalian muscle, 18.
 —. See EDWARDS and CATTELL, 31.
 Cerebral cortex, bilateral representation of lower extremity in, 36.

- Cerebral cortex, localization, 3.
 — reaction to optic nerve stimulation, 4.
- Cerebrospinal elasticity in cat and macaque, 668.
 — fluid and elasticity of dural sac, 292.
 — and intralabyrinthine pressure, 396.
 —, rate of formation of, 697.
- CHAMBERS, W. H. and E. MARQUIS. Some factors influencing glucose tolerance in the fasting dog, 18.
- CHANG, T. H., R. W. GERARD and M. SHAFFER. The influence of ions on nerve respiration, 19.
- CHEN, A. L. See CHEN, JENSEN and CHEN, 20.
- CHEN, K. K., H. JENSEN and A. L. CHEN. Comparative studies on the principles isolated from twelve species of toads, 20.
- CHUTE, A. L. and L. IRVING. The effect of acid feeding upon the composition of bone, 20.
- Circulation, effect of elasticity on, 376.
 — in fetal albino rat, 304.
 —, response of, to adrenalin in rat, 105.
- Circulatory adjustments to moderate exercise, 494.
- CLARK, J. H. A method for measuring elasticity in vivo and results obtained on the eyeball at different intraocular pressures, 474.
 —. The elasticity of the eyeball under different intraocular pressures, 21.
 —. See FLEXNER, CLARK and WEED, 292.
- Coagulation, effect of heparin on, in tissue extracts, 64.
- COLLINS, D. A. and F. H. SCOTT. The freezing-points of serum and corpuscles, 21.
- Colloids, osmotic pressure of, 409.
- Convulsions, experimental, effect of ketogenic diet on, 89.
 —, experimental, in rat, 22.
- COOMBS, H. C. The production of experimental convulsions in the white rat, 22.
- Copulation reflex pattern in spinal cat, 30.
- COREY, E. L. A possible correlation between early ossification and the blood elements of the albino rat, 23.
 —. Maternal leucocyte changes following fetal death, 23.
 —. Observations on circulation in the fetal albino rat, 24, 304.
 — and S. W. BRITTON. The effect of cortico-adrenal extract on the blood-cellular elements, 23.
- Corpora lutea extract and uterine motility, 86.
 — produced by intra-follicular injections of urine, 34.
 —, relation of, to ovulation, 545.
- Cortex, effect of lesions of, on grasp reflex, 87.
 —, relation of, to organs of vegetative system, 96.
- Cortical tissue, growth of, in rat, 662.
- Cortin as a general tissue hormone, 50.
- Co TUI, F. See BODO, Co TUI and FARBER, 10.
- COWGILL, G. R. Studies in the physiology of vitamins. XVIII. Measurements of the vitamin B requirement in several species of animals, 115.
 —. See GILMAN and COWGILL, 42.
- CRANDALL, L. A., JR. and G. M. ROBERTS. Blood volume after intravenous fluid in normal and Eck fistula dogs, 24.
- CRIDER, J. O. and J. E. THOMAS. The influence of certain conditions in the duodenum on the rate of secretion and acidity of the gastric juice, 25.
- CRILE, G., O. GLASSER, M. TELKES and A. F. ROWLAND. Further studies of autotrophic cells, 26.
- CRISLER, G. and E. J. VAN LIERE. The effect of anoxemia on the emptying time of the stomach, 26.
 —. See VAN LIERE and CRISLER, 100.
- CRITTENDEN, P. J. An electrocardiographic study of viscero-cardiac reflexes, 26.

- CROMER, S. P. and R. H. YOUNG. On the existence of afferent respiratory impulses mediated by the stellate ganglia, 27.
- D**AGGS, R. G. and H. C. H. WARDLAW. A study of the conversion of fat to carbohydrate in the germinated castor bean by means of a modified oxy-calorimeter, 27.
- DAMESHEK, W. and J. LOMAN. Direct intra-arterial blood-pressure readings in man, 140.
- DANIEL, J. and H. A. ABRAMSON. The effect of alcohol on the electric mobility of gelatin, 28.
- DANN, M. Respiratory metabolism during premortal rise in nitrogen excretion, 27.
- DAVIS, H. and P. A. DAVIS. Fatigue in skeletal muscle in relation to the frequency of stimulation, 339.
- DAVIS, H. and L. J. SAUL. The frequency of impulses in the auditory pathways, 28.
- See LEESE and DAVIS, 68.
- DAVIS, J. See FAHR, DAVIS, KERKHOF, HALLOCK and GIERE, 33, 376.
- DAVIS, M. E. See MACHT and DAVIS, 71.
- DAVIS, P. A. See DAVIS and DAVIS, 339.
- Decerebration, chronic, 5.
- Dehydration in hyperthermia, 78.
- Dehydrocholic acid, physiologic action of, 268.
- Dextrose and levulose, relative absorption rates of, 565.
- Diabetes mellitus, latent tolerance in, 41.
- Dichromats, blue excitation curve of, 686.
- Diet deficient in inorganic salts, 98.
- in vitamin A, effects of, 529.
- DRAGSTEDT, C. A. and E. GEBAUER-FUELNEGG. Observations on an anaphylatoxin in anaphylactic shock, 29.
- DRAGSTEDT, L. R. and H. E. HAYMOND. The cause of death in experimental acute pancreatitis, 29.
- DRINKER, C. K. and M. E. FIELD. Observations on the lymphatics in the web of the frog, 30.
- DuBOIS, D. See HIMWICH, NAHUM, RAKIETEN, FAZIKAS and DuBOIS, 57.
- DUNN, H. L. and W. M. BOOTHBY. Significance of variation in basal metabolic rate determinations, 30.
- DUNNING, F. See MACHT, DUNNING and STICKELS, 70.
- Dura, contents of dural sac, 292.
- , elasticity of, 292, 668.
- DUSSER DE BARENNE, G. and Y. D. KOSKOFF. The release of a copulation reflex pattern in the "secondary" spinal cat, 30.
- DWORKIN, S. See SUTHERLAND and DWORKIN, 97.
- E**AR, frequency of impulses in auditory pathways, 28.
- , internal, relation of pressure in, to cerebrospinal fluid pressure, 396.
- EATON, A. G. and J. R. MURLIN. The absorption of insulin from the gastro-intestinal tract, 31.
- Edema, rôle of water and chlorides in experimental, 5.
- EDWARDS, D. J. and MCK. CATTELL. Measurements on the visco-elastic changes in muscle under pressure, 31.
- See BROWN and EDWARDS, 15.
- Egg, effect of environment on cytoplasmic structures of, 78.
- EHRE, S. See GOLDSTEIN, TATELBAUM, EHRE and MURLIN, 166.
- Elasticity, effect of, on circulation, 376.
- of the eyeball, 474.
- ELLIS, L. B. Circulatory adjustments to moderate exercise in normal individuals, with particular reference to the interrelation between the velocity and volume of the blood flow, 494.
- ELLIS, M. M. and D. B. CALVIN. Glycogen storage by fresh-water mussels, 32.
- EMERY, F. E. The anterior pituitary sex hormone in the blood and urine of rats, 246.

- Epinephrine, effect of, on muscle glycogen, 462.
- ERB, W. See LANDIS, JONES, ANGEVINE and ERB, 67.
- ERLANGER, J. See BLAIR and ERLANGER, 9, 559.
- ESSEX, H. E. See BALDES, HERRICK and ESSEX, 3.
- , See HERRICK, ESSEX and BALDES, 213.
- Excretion of inorganic sulphates in man, 51.
- Exercise albuminuria, 357, 365.
- , moderate, circulatory adjustments to, 494.
- Eye, color-blind, blue excitation curve of, 686.
- , pupillary light reflex of, in relation to superior colliculi, 64.
- , time relations of visual pathway of, 8.
- Eyeball, elasticity of, 474.
- , elasticity of, under different intraocular pressures, 21.
- EYSTER, J. A. E. and E. V. HICKS. The effect of respiration on cardiac output, 33.
- FAHR**, G., J. DAVIS, A. KERKHOF, P. HALLOCK and E. GIERE. Hemodynamics of arteriosclerosis: effects of increase in coefficient of volume elasticity of large arteries on circulation, 33.
- , —, —, —, —. Hemodynamics of arteriosclerosis. Influence of change of coefficient of volume elasticity on circulation, 376.
- FARBER, L. A. See BODO, CO TUI and FARBER, 10.
- Fat, carbohydrate production from, 185.
- , control of deposition of liver, 7.
- , conversion to carbohydrate in castor bean, 27.
- , possibility of conversion into carbohydrate, 51.
- Fatigue in skeletal muscle, 339.
- FAZIKAS, J. F. See HIMWICH, HAYNES and FAZIKAS, 711.
- , See HIMWICH, NAHUM, RAKIETEN, FAZIKAS and DUBOIS, 57.
- FENN, W. O. The stimulating effect of carbon monoxide on muscle metabolism, 34.
- FETTER, D. and A. J. CARLSON. I. The effect of experimental hyperthyroidism on gastro-intestinal motility, 598.
- , L. BARRON and A. J. CARLSON. II. The effect of induced hyperthyroidism on the gastro-intestinal motility of vagotomized dogs, 605.
- Fetus, circulation in rat, 304.
- Fever, bacterial, blood changes in, 106.
- FIELD, M. E. See DRINKER and FIELD, 30.
- FIROR, W. M. See GROLLMAN and FIROR, 46.
- FLEXNER, L. B., J. H. CLARK and L. H. WEED. The elasticity of the dural sac and its contents, 292.
- and H. WINTERS. The rate of formation of cerebrospinal fluid in etherized cats, 697.
- , See WEED and FLEXNER, 668.
- FRANKE, F. E. and L. D. SEAGER. Reactions of pial vessels, 35.
- FREEMAN, E. and W. F. HAMILTON. The blue excitation curve of dichromats, 686.
- FRIEDMAN, G. S. and M. H. FRIEDMAN. An examination of cerebrospinal fluid, by means of the uterine fistula, for the presence of the oxytocic factor of the posterior pituitary, 35.
- FRIEDMAN, M. H. The production of functional corpora lutea by the direct intrafollicular injection of extracts of pregnancy urine, 34, 482.
- , See FRIEDMAN and FRIEDMAN, 35.
- FULLARTON, R. See REZNIKOFF and FULLARTON, 87.
- FULTON, J. F. Bilateral representation of the lower extremity in the motor cortex of the chimpanzee, 36.
- FUNK, C. and B. HARROW. The male hormone. V. The effect of the male hormone and the anterior pituitary, 218.
- GALL-BLADDER** and hepatic bile, anion and cation content of, 86.

- Gall-bladder and hepatic bile, effect of cholecystokinin on contraction and evacuation of, 101.
- , effects of cholecystokinin on, 61.
- , evacuation of, 74.
- , relation of duodenal contents to, 60.
- GARREY, W. E. and V. BUTLER. The digestive leucocytosis question, 37.
- , SEE KING, GARREY and BRYAN, 64.
- GASSER, H. S. and H. T. GRAHAM. The end of the spike-potential of nerve and its relation to the beginning of the after-potential, 37, 316.
- Gastric secretion, histamine and, 331.
- Gastro-intestinal motility, thyroid feeding and, 598, 605.
- GEBAUER-FUELNEGG, E. See DRAGSTEDT and GEBAUER-FUELNEGG, 29.
- Gelatin, effect of alcohol on electric mobility of, 28.
- GELFAN, S. and G. H. BISHOP. Action potentials from single muscle fibers, 37, 678.
- GELLHORN, E. The validity of the Hofmeister series in heart and striated muscles, 38.
- GEMMILL, C. L. The respiratory quotient of working isolated muscles with low carbohydrate content, 39.
- GERARD, R. W. and W. H. MARSHALL. Nerve conduction velocity and equilibration, 39.
- , See CHANG, GERARD and SHAFFER, 19.
- GERBASI, M. J. See ADOLPH, GERBASI and LEPORE, 1.
- GESELL, R. and C. A. MOYER. Changes in respiratory movements accompanying chemical administrations, 41.
- , Changes in respiratory movements occurring as a result of nerve section and stimulation of sensory nerves, 40.
- , Spontaneous changes in type of breathing and changes occurring in respiratory movements under varying mechanical conditions, 39.
- GESELL, R. See WINDER, OWEN and GESELL, 103.
- GIBSON, R. B. Latent tolerance in diabetes mellitus, 41.
- GIERE, E. See FAHR, DAVIS, KERKHOF, HALLOCK and GIERE, 33, 376.
- GILMAN, A. and G. R. COWGILL. A study of the osmotic relations of blood and gastric juice, 42.
- GILSON, A. S., JR. Integration of nerve impulse effects, 42.
- , See PEUGNET and GILSON, 83.
- GINSBURG, E. See BANUS and GINSBURG, 106.
- GLASSER, O. See CRILE, GLASSER, TELKES and ROWLAND, 26.
- Glomerular clearance in dog, effects of feeding and maintenance diet on, 625.
- Gluconeogenesis from fat, 185.
- Glucose tolerance in fasting dogs, 18.
- in phlorhizinized dogs, 166.
- Glycogen, muscle, effect of epinephrine on, 462.
- storage by fresh-water mussels, 32.
- Glycogenesis in totally phlorhizinized organism, 621.
- GOLAND, P. P. See MORGAN and GOLAND, 274.
- GOLDSTEIN, L. A., A. J. TATELBAUM, S. EHRE and J. R. MURLIN. Glucose tolerance in the phlorhizinized dog as affected by renal vessel ligation and by insulin, 166.
- GRAHAM, C. H. A study of the rôle of inhibition in color contrast, 43.
- GRAHAM, H. T. See GASSER and GRAHAM, 37, 316.
- Granulocytes, action of benzol on, 87.
- GREENBERG, L. A. See HAGGARD and GREENBERG, 48.
- GREENE, C. W. and K. E. MANEVAL. The peripheral innervation of the heart as revealed by the specific action of the myoneural drugs on isolated strips of the turtle's heart 43.
- GREENGARD, H. See JUNG and GREENGARD, 61.

- GREGENSEN, M. The physiological mechanism of thirst, 44.
- GREGG, D. E. The calorogenic action of lecithin, 45.
- GREISHEIMER, E. M. and F. P. ARNY. Blood chemistry variations in fifty women and fifty men, 45.
- , SEE HEMINGWAY and GREISHEIMER, 54.
- GROLLMAN, A. and W. M. FIROR. Observations on the hormone of the adrenal cortex, 46.
- Growth of pigeon, metabolism during, 251.
- , significance of amino acids in, 47.
- GRUNDFEST, H. Excitability of the single-fiber nerve-muscle complex, 47.
- GUDERNATSCH, F. and O. HOFFMAN. A differentiation stimulus exerted by some amino acids during development, 47.
- H**AGGARD, H. W. and L. A. GREENBERG. The respiratory quotient as an index of meal intervals, 48.
- HAIG, C. See HECHT, WALD and HAIG, 52.
- HALDI, J. Inhibition of lactic acid formation in brain and kidney tissue produced by intravenous injection of sodium monoiodoacetate, 48, 469.
- , The accumulation of lactic acid in excised liver tissue, 236.
- , See BEAN and HALDI, 6.
- HALL, E. M. A chick heart method of biological assay. I. Digitalis, 48.
- HALLOCK, P. See FAHR, DAVIS, KERKHOF, HALLOCK and GIERE, 33, 376.
- HAMILTON, W. F. See FREEMAN and HAMILTON, 686.
- HAMMETT, D. W. See HAMMETT and HAMMETT, 49.
- HAMMETT, F. S. and D. W. HAMMETT. Influence of sulphhydryl and sulfoxide on aberrant disorganized growths in the regenerating chela of the Hermit crab, 49.
- HANEY, H. F. The effect of stimulation of the cervical sympathetic trunk upon the respiratory metabolism of rabbits, 49.
- HARROW, B. See FUNK and HARROW, 218.
- HARTLINE, H. K. The effect of dark adaptation on the discharge of impulses in single optic nerve fibers, 50.
- HARTMAN, F. A., K. A. BROWNELL and J. E. LOCKWOOD. Cortin as a general tissue hormone, 50.
- HARVEY, E. N. The microscope-centrifuge, 51.
- HAWLEY, E. E. Studies on the possibility of gluconeogenesis from fat. I. Response of the phloridized dog to insulin, 185.
- and J. R. MURLIN. Studies on the possibility of gluconeogenesis from fat. III. The respiratory metabolism of the pig on a high fat diet, 51.
- HAYMAN, J. M., JR. The excretion of inorganic sulphates in man, 51.
- HAYMOND, H. E. See DRAGSTEDT and HAYMOND, 29.
- HAYNES, F. W. Factors which influence the flow and protein content of subcutaneous lymph in the dog. I. Hemorrhage and hyperemia, 223.
- , Factors which influence the flow and protein content of subcutaneous lymph in the dog. II. The effect of certain substances which alter the capillary circulation, 612.
- , Further observations on the rapidity of passage of substances from blood to lymph in the dog, 232.
- , See HIMWICH, HAYNES and FAZIKAS, 711.
- Heart, absorption of oxygen, glucose and lactic acid by, 76.
- and cardiac nerve of *Limulus*, 53.
- , cardiodynamic effects of coronary ligation, 81.
- , effect of respiration on output of, 33.
- , musculature, effects of subthreshold electrical currents on, 83.
- of chick in biological assay of digitalis, 48.
- , peripheral innervation of, 43.

- Heart, position and character of electrocardiogram, 62.
- rate, rhythmical arterial expansion as factor in control of, 76.
- , reflex inhibition of branchio-vascular origin, 69.
- , vagus action of, in acute anoxemia, 100.
- Hearts, lymphatic, homolateral synchronism of, 85.
- HECHT, S., G. WALD and C. HAIG. The dark adaptation of different retinal areas, 52.
- HEGNAUER, A. H. Lactic acid accumulation in sugar non-irritability, 52.
- HEINBECKER, P. Further studies on the heart and median cardiac nerve of *Limulus*, 53.
- HELLEBRANDT, F. A. Studies on albuminuria following exercise. I. Its incidence in women and its relationship to the negative phase in pulse pressure, 357.
- and E. BROGDON. Studies on albuminuria following exercise, 53.
- , — and L. E. A. KELSO. Studies on albuminuria following exercise. II. Its relationship to the speed of doing work, 365.
- HEMINGWAY, A. and E. M. GREISHEIMER. Chronaxie and blood sugar, 54.
- Hemoglobin solutions, inactivation of, 86.
- HENDERSON, Y. and E. M. RADLOFF. The chemical control of breathing, as shown in the acid base balance of the blood, under progressive decrease of oxygen, 647.
- — —. Two stages in the effects of decreasing oxygen, 54.
- HENSHAW, P. S. The different physiological effectiveness of 165 KV and 700 KV x-rays and gamma rays, 54.
- HERRICK, J. F., H. E. ESSEX and E. J. BALDES. The effect of lumbar sympathectomy on the flow of blood in the femoral artery of the dog, 213.
- See BALDES, HERRICK and ESSEX, 3.
- HERRIN, R. C. and W. J. MEEK. Further studies on intestinal obstruction, 55.
- HERSHEY, J. M. See BEST, HERSHEY and HUNTSMAN, 7.
- HERTZMAN, A. B. The relation of oxidation-reduction potentials to the regulation of respiration, 56.
- HICKMAN, T. A. and E. B. POWERS. The physiology of respiration of fishes in relation to the environment. VI. The oxygen and carbon dioxide dissociation curves of whole blood, 56.
- HICKS, E. V. See EYSTER and HICKS, 33.
- HIGGINS, H. L. Factors governing the excretion of nitrogen and fat by the bowel, 56.
- High frequency currents, physiological effects of, 194, 203.
- HIMWICH, H. E., F. W. HAYNES and J. F. FAZIKAS. Effect of posterior pituitary extracts on the constituents of the blood, 711.
- and L. H. NAHUM. The respiratory quotient of the brain, 446.
- , —, N. RAKIETEN, J. F. FAZIKAS and D. DuBOIS. Effects of alcohol on metabolism, 57.
- HINES, M. See RICHTER and HINES, 87.
- Histamine as hormone for gastric secretion, 331.
- HITCHCOCK, F. A. and R. M. KRAFT. The effect of ethyl alcohol on the respiratory exchanges during rest, work and recovery, 57.
- HOFFMAN, O. See GUDERNATSCH and HOFFMAN, 47.
- HOOKE, D. R. See KOUWENHOVEN, HOOKE and LANGWORTHY, 65.
- Hormone for gastric secretion, histamine as, 331.
- , male, 218.
- , —, effect of, on castration cells, 239.
- produced by chorda tympani stimulation, 2.
- , sex, in blood and urine, 246.
- HORRALL, O. H. See REGAN and HORRALL, 268.

- HOWARD, E. Osmotic relationships in the egg, 57.
- HUGGINS, C. B. Chemical relationships in the fluids of the seminal tract, 58.
- HUGHSON, W. A note on the relationship of cerebrospinal and intralabyrinthine pressures, 396.
- HUNTSMAN, M. E. See BEST, HERSHEY and HUNTSMAN, 7.
- INGRAHAM, R. C. See VISSCHER and INGRAHAM, 101.
- INGRAM, W. R. See RANSON and INGRAM, 690.
- Inhibition in color contrast, 43.
- Insulin, absorption of, from gastro-intestinal tract, 31.
- , administration of massive doses, 2.
- , effect of, on glucose tolerance in phlorhizinized dogs, 166.
- , relation of, to liver glycogen, 10.
- , response of phlorhizinized dogs to, 185.
- Intestinal absorption, fate of levulose during, 570.
- contents, reaction of, in chickens, 2.
- excretion of nitrogen and fat, 56.
- mucosa in conversion of levulose to dextrose, 16.
- obstruction, 55.
- Intestine, absorption of fluid from, 434.
- , effect of psyllium seeds on motility of, 71.
- , large, motor activity of, 511.
- , passage of urea between blood and, 391.
- Iodine in thyroglobulin, physiological activity of, 583.
- IRVING, L. and M. J. WILSON. The carbon dioxide content of gastric mucosa, 58.
- See CHUTE and IRVING, 20.
- IVY, A. C. and M. S. KIM. On the mode of action of "secretagogues" (liver extract) in promoting gastric secretion, 59.
- , O. RICHTER and M. S. KIM. Some experiments bearing on the etiology of pernicious anemia, 59.
- IVY, A. C. and M. S. KIM. See SACKS, IVY, BURGESS and VANDOLAH, 331.
- JACOBSEN, C. F. and M. A. KENNARD. The effect of ephedrine sulphate on the reflexes of spinal monkeys, 60.
- JARES, J. J. Studies on induction of ovulation and the inhibitory influence of corpora lutea on ovulation in the rabbit, 545.
- JENSEN, H. See CHEN, JENSEN and CHEN, 20.
- JOHNSTON, C. G. See RAVDIN, JOHNSTON, RIEGEL, AUSTIN and WRIGHT, 86.
- JOLLIFFE, N., J. A. SHANNON and H. W. SMITH. V. The effects of xylose and sucrose upon the glomerular and urea clearances, 639.
- See SHANNON, JOLLIFFE and SMITH, 625.
- JONES, K. K. Analysis of duodenal contents in regard to gall-bladder evacuation in man, 60.
- JONES, L. See LANDIS, JONES, ANGEVINE and ERB, 67.
- JUNG, F. T. and H. GREENGARD. Effects of cholecystokinin on the isolated gall bladder, 61.
- KARR, J. W. See NASSET, KARR and PETERS, 78.
- KARRER, E. See STEVENS, KARRER and SNODGRASS, 97.
- KATZ, L. N. and W. ACKERMAN. The effect of the heart's position on the electrocardiographic appearance of ventricular extrasystoles, 62.
- KEITH, N. M., E. G. WAKEFIELD and M. H. POWER. The excretion and utilization of sucrose when injected intravenously in man, 63.
- KELLER, A. D. and L. STEWART. The superior colliculi and the pupillary light reflex in the cat, 64.
- KELSO, L. E. A. See HELLEBRANDT, BROGDON and KELSO, 365.
- KENNARD, M. A. See JACOBSEN and KENNARD, 60.
- KERKHOF, A. See FAHR, DAVIS, KERKHOF, HALLOCK and GIERE, 33, 376.

- Kidney function, effect of rigid casts on, 573.
- , molecular concentration of glomerular fluid of, 102.
- , tissue, lactic acid formation in, 469.
- , vessel ligation, effect of, on glucose tolerance in phlorhizinized dogs, 166.
- KIM, M. S. See IVY, and KIM, 59.
- , See IVY, RICHTER and KIM, 59.
- KING, C. E., W. E. GARREY and W. R. BRYAN. Some factors affecting spinal reflexes, 64.
- KING, J. T. Heparin inhibition of "activated" and normal tissue extracts, 64.
- KOPPANYI, T. Studies on the synergism and antagonism of drugs. I. The non-parasympathetic antagonism between atropine and the mitotic alkaloids, 65.
- KOSKOFF, Y. D. See DUSSER DE BAR-ENNE and KOSKOFF, 30.
- KOUWENHOVEN, W. B., D. R. HOOKER and O. R. LANGWORTHY. Recovery of the electrically fibrillated dog heart by the electric countershock, 65.
- KRAFT, R. M. See HITCHCOCK and KRAFT, 57.
- KRUEGER, T. Theoretical considerations concerning the acidity of certain areas of the brain during the administration of low oxygen, 66.
- KRUMBHAAR, E. B. See WILSON and KRUMBHAAR, 102.
- KRUSE, H. D. See ORENT, KRUSE and MCCOLLUM, 454.
- L**ACTIC acid accumulation in sugar non-irritability, 52.
- , —, formation in brain and kidney, 48, 469.
- , —, in excised liver tissue, 236.
- , —, utilization after hepatectomy, 12.
- LANDIS, E. M., L. JONES, M. ANGEVINE and W. ERB. The passage of fluid and protein through the human capillary wall during venous congestion, 67.
- LANGWORTHY, O. R. See KOUWENHOVEN, HOOKER and LANGWORTHY, 65.
- LAPLACE, L. and H. C. BAZETT. Comparison of indirect with direct methods of measuring blood pressure in dogs, 68.
- LAURENS, H. The influence of flaming carbon arc radiation on blood pressure, 68.
- LAWSON, H. See TEMPLETON and LAWSON, 511.
- Lecithin, calorogenic action of, 45.
- LEESE, C. E. and H. DAVIS. Sustained tension in skeletal muscle in relation to blood flow, 68.
- LEFORE, M. J. See ADOLPH, GERBASI and LEFORE, 1.
- Leucocyte changes in mother following death of fetus, 23.
- Leucocytosis, digestive, 37.
- Levulose, dextrose and, relative absorption rates of, 565.
- , fate of, during intestinal absorption, 570.
- LINDSAY, M. See NICE and LINDSAY, 79.
- Liver glycogen, storage of water with, 72.
- , removal of, in one-stage operation, 73.
- , tissue, excised, lactic acid in, 236.
- LLOYD, R. See BURGET, MOORE and LLOYD, 16, 565, 570.
- LOCKWOOD, J. E. See HARTMAN, BROWNELL and LOCKWOOD, 50.
- LOEBEL, R. O. See SHORR, LOEBEL and RICHARDSON, 92.
- LOMAN, J. See DAMESHEK and LOMAN, 140.
- LOWRY, T. See BARD, BROOKS and LOWRY, 3.
- LUTZ, B. R. and L. C. WYMAN. Reflex cardiac inhibition of branchio-vascular origin in *Squalus acanthias* and *Necturus maculosus*, 69.
- Lymph colloids from lacteals, osmotic pressure of, 101.
- , effect of hemorrhage on, 223.
- , —, hyperemia on, 223.
- , lacteal, proteins in, 421.

- Lymph passage of substances from blood to, 232.
- , subcutaneous, flow and protein content of, 223, 612.
- Lymphatics in web of frog, 30.
- MACHELLA, T. E.** Hot-wire principle applied to measurement of blood velocity in vessels *in situ*, 70.
- MACHT, D. I.** Quantitative comparison of some muscle and nerve reactions after decerebration and decapitation, respectively, 70.
- and J. A. BLACK. Concerning the effect of psyllium seeds on intestinal movements, 71.
- and M. E. DAVIS. Comparative toxicity of aliphatic alcohols containing 1 to 18 carbon atoms, 71.
- , F. DUNNING and A. E. STICKELS. Action of some derivatives of hydroxy-benzyl alcohol, 70.
- McCLELLAN, W. S.** See SPENCER and McCLELLAN, 95.
- McCOLLUM, E. V.** See ORENT, KRUSE and McCOLLUM, 454.
- McCREA, F. D.** Rhythmical arterial expansion as a factor in the control of heart rate, 76.
- McGINTY, D. A.** and A. T. MILLER, JR. Oxygen, glucose and lactic acid absorption by mammalian heart, 76.
- MACKEY, E. M.** The storage of water with glycogen in the liver, 72.
- McMANUS, M.** See ROWE, PLUMMER and McMANUS, 90.
- McQUEEN-WILLIAMS, M.** See REESE and McQUEEN-WILLIAMS, 239.
- Magnesium deficiency in animals, 454.
- MAJOR, S. G.** Glycogenesis in the totally phlorhizinized organism, 621.
- and F. C. MANN. Glycogenolytic effect of epinephrine on skeletal muscle, 462.
- MALTBY, A. B.** The effects of partial and complete occlusion on pressures in compressed arteries, 72.
- MANEVAL, K. E.** See GREEN and MANEVAL, 43.
- Manganese as factor in reproduction, 591.
- MANN, F. C.** See BOLLMAN and MANN, 12.
- See MAJOR and MANN, 462.
- MARESH, F.** Thermo-electric temperature studies in abdominal viscera of normal rabbits, 72.
- See MARTIN and MARESH, 74.
- MARKOWITZ, J., W. M. YATER and W. H. BURROWS.** The post-operative course of dogs dehepatized by a single one-stage method, 73.
- MARQUIS, E.** See CHAMBERS and MARQUIS, 18.
- MARRAZZI, A. S.** On the emptying of the gall bladder, 74.
- MARSH, M. E.** Respiratory metabolism and pulmonary ventilation in the tuberculous subject, 73.
- MARSHALL, W. H.** See GERARD and MARSHALL, 39.
- MARTIN, S. J.** and F. MARESH. Temperature studies in normal and suprarenalectomized rats, 74.
- MAST, S. O.** and D. M. PACE. Synthesis of carbohydrates, lipids and proteins from inorganic salts, carbon dioxide and water in the absence of chlorophyll and light, 75.
- MATHIEU, F.** and B. O. BARNES. Fate of the thyroid hormone in experimental hyperthyroidism, 75.
- MAVOR, J. W.** The control of body temperature in the rat in a high frequency electrostatic field, 75.
- MEEK, W. J.** See HERRIN and MEEK, 55.
- Membrane equilibrium in the dynamic ultrafiltration process, 101.
- Metabolism, basal, of pigeon, 260.
- during growth of pigeon, 251.
- , effects of alcohol on, 57.
- , influence of irradiated ergosterol on, 86.
- of birds, factors affecting, 88.
- of levulose, 90.
- of the Chinese, 79.
- , phospholipid, rôle of vitamin A in, 77.
- , variation in basal rate of, 30.
- Microscope-centrifuge, 51.

- MILLER, A. T., JR. See MCGINTY and MILLER, 76.
- MITCHELL, H. S. Factors influencing anemia development in young rats, 503.
- MONAGHAN, B. R. The rôle of vitamin A in phospholipid metabolism, 77.
- MOND, R. and H. NETTER. Regulation of sodium by the muscle, 77.
- MOORE, A. R. The dependence of cytoplasmic structures in the egg of sea urchin, on the ionic balance of the environment, 78.
- MOORE, P. See BURGET, MOORE and LLOYD, 16, 565, 570.
- MORGAN, L. O. and P. P. GOLAND. Demonstration of the accelerator nerve and of postganglionic parasympathetic fibers in the vago-sympathetic trunk of the dog, 274.
- MORGULIS, S. and S. PINTO. The effect of arsenate on blood glycolysis, 77.
- Motor activity of large intestine, 511.
- MOYER, C. A. See GESELL and MOYER, 39, 40, 41.
- MULLER, G. L. See SUZMAN, MULLER and UNGLEY, 529.
- MURLIN, J. R. See EATON and MURLIN, 31.
- See GOLDTSEIN, TATELBAUM, EHRE and MURLIN, 166.
- See HAWLEY and MURLIN, 51.
- Muscle, action potentials of single fibers of, 37.
- and nerve reactions after decerebration and decapitation, 70.
- exercise, protein as fuel in, 85.
- fibers, single, action potentials from, 678.
- glycogen, effect of epinephrine on, 462.
- , lactic acid cycle of, in diabetic dog, 92.
- metabolism, effect of CO on, 34.
- , minced, relation of iodo-acetic acid to lactate accumulation, 94.
- , recovery heat-production of, in mammals, 18.
- , regulation of sodium content of, 77.
- Muscle, skeletal, fatigue in, 339.
- , smooth, effect of cyanide on contracture of, 91.
- , —, initial heat of, 13.
- , striated, contracture phenomenon in, 15.
- , tension-length relation of, 97.
- , validity of Hofmeister series in heart and striated, 38.
- , visco-elastic changes in, under pressure, 31.
- NAHUM, L. H. See HIMWICH and NAHUM, 446.
- See HIMWICH, NAHUM, RAKIETEN, FAZIKAS and DuBois, 57.
- NASSET, E. S. Physiological effects of high frequency current:
- II. Further studies on respiratory metabolism of anesthetized dogs, 194.
- III. The carbon dioxide and oxygen content and capacity and the concentration of blood of anesthetized dogs, 203.
- , J. W. KARR and S. B. PETERS. Dehydration in hyperthermia produced by high frequency electric current, 78.
- NECHELES, H. Further studies on the metabolism of Chinese, 79.
- Nerve conduction velocity and equilibration, 39.
- fibers of eye, single, effect of dark adaptation on discharge of impulses, 50.
- , polarization of, by extrinsic action potentials, 9.
- impulse, integration of, 42.
- muscle complex, excitability of single-fiber, 47.
- , oxygen consumption of, 91.
- potentials, extrinsic effects of, 559.
- , relation of spike-potential of, to after-potential, 37.
- respiration, influence of ions on, 19.
- , spike potential of, 316.
- stimulation, effect of, in curarized preparations, 12.
- NETTER, H. See MOND and NETTER, 77.

- NICE, L. B. and M. LINDSAY. The relation of the spleen to changes in the specific gravity of the blood, 79.
- NICHOLSON, H. C. Effects of flooding the medulla with Locke's solution of varying temperature upon respiration and circulation, 80.
- NICOLL, P. A. See SCHMITT and NICOLL, 91.
- NUSSMANN, T. C. See RIDDLE, NUSSMANN and BENEDICT, 251.
- NYBOER, J. Comparison of changes in cardiac and respiratory rhythms effected by common changes in physiological conditions, 80.
- ORENT, E. R., H. D. KRUSE and E. V. MCCOLLUM. Studies in magnesium deficiency in animals. II. Species variation in symptomatology of magnesium deprivation, 454.
- ORIAS, O. The cardiodynamic effects following ligation of coronary arteries, 81.
- ORTH, O. S. and W. E. BURGE. A comparison of the catalytic activity of the ash of the different tissues, 82.
- See VERDA, ORTH and BURGE, 100.
- Osmotic pressure of colloids, criteria for measurement of, 409.
- — — of lacteal lymph and intestinal absorption, 434.
- — — proteins in blood serum and lacteal lymph, 421.
- relationships in the egg, 57.
- Ovulation, relation of corpora lutea to, 545.
- OWEN, H. See WINDER, OWEN and GESELL, 103.
- Oxygen deficiency, effect of, on breathing, 647.
- PACE, D. M. See MAST and PACE, 75.
- Pancreatitis, experimental, cause of death in, 29.
- Parasympathetic fibers in vagus, 274.
- PATTERSON, T. L. A study of the reflex influence of the sciatic and vagus on the motility of the bullfrog's stomach, 82.
- PENDLETON, W. R. and F. E. WEST. The passage of urea between the blood and the lumen of the small intestine, 391.
- PETERS, S. B. See NASSET, KARR and PETERS, 78.
- PEUGNET, H. B. and A. S. GILSON, JR. The effects upon cardiac musculature of subthreshold electrical currents, 83.
- Phlorhizin, action of, on metabolism of carbohydrate, 621.
- Pial vessels, reactions of, 35.
- PINTO, S. See MORGULIS and PINTO, 77.
- Pituitary, anterior, castration cells of, 239.
- , —, effect of castration on, 309.
- , —, relation to male hormone, 218.
- extracts, effect of, on blood constituents, 711.
- secretion in cerebrospinal fluid, 35.
- PLUMMER, A. J. See ROWE, PLUMMER and McMANUS, 90.
- POND, S. E. Improved methods for regional analysis of bone, 83.
- POSEY, L. C. See CARMICHAEL and POSEY, 17.
- POWER, M. H. See KEITH, WAKEFIELD and POWER, 63.
- POWERS, E. B. The physiology of respiration of fishes in relation to the environment. X. The mechanism of the deposition of gases into the swim-bladder, 84.
- See HICKMAN and POWERS, 56.
- PRATT, F. H. and M. A. REID. Homolateral synchronism of lymphatic hearts in the frog and conditions attending neurogenic-myogenic reversal, 85.
- Pregnancy urine, effect of intrafollicular injection of, 482.
- PRIEST, W. S. See SOSKIN, PRIEST and SCHUTZ, 95.
- Protein content, flow and, of subcutaneous lymph, 612.
- Proteins in blood serum and lacteal lymph, 421.
- Pulse pressure and albuminuria, 357.

- RADIATION**, differential physiological effects of, 54.
 —, effect of, on pressor action of nicotine, 100.
- RADLOFF**, E. M. See **HENDERSON** and **RADLOFF**, 54, 647.
- RAKIETEN**, N. See **HIMWICH**, **NAHUM**, **RAKIETEN**, **FAZIKAS** and **DUBOIS**, 57.
- RANSON**, S. W. and W. R. **INGRAM**. Catalepsy caused by lesions between the mammillary bodies and third nerve in the cat, 690.
- RAPPORT**, D. and A. **CANZANELLI**. Protein as a fuel in muscular exercise, 85.
- RAVDIN**, I. S., C. G. **JOHNSTON**, C. **RIEGEL**, J. H. **AUSTIN** and S. **WRIGHT**. The anion-cation content of hepatic and gall-bladder bile, 86.
- RAT**, G. B. and C. I. **THOMAS**. Observations on the inactivation of dialyzed hemoglobin solutions, 86.
- REED**, C. I. The influence of irradiated ergosterol on the metabolic rate of normal dogs, 86.
- REESE**, J. D. and M. **MCQUEEN-WILLIAMS**. Prevention of "castration cells" in the anterior pituitary of the male rat by administration of the male sex hormone, 239.
- Reflexes** conditioned to sound and vibrations, 98.
 —, spinal, 62.
 —, —, effect of ephedrine on, 60.
- REGAN**, J. F. and O. H. **HORRALL**. The physiologic action of dehydrocholic acid, 268.
- Regeneration** in crab influenced by chemical substances, 49.
- REID**, M. A. See **PRATT** and **REID**, 85.
- Renal activity**, effects of feeding and maintenance diet on, 625.
 —, —, —, xylose and sucrose on, 639.
 —, function, effect of rigid casts on, 573.
- Reproduction**, manganese as factor in, 591.
- Respiration and circulation**, effect of temperature of medulla on, 80.
 —, character of, under varying mechanical conditions, 39.
- Respiration and circulation**, chemical regulation of and carotid sinus reflexes, 91.
 —, effect of alcohol on, 57.
 —, effect of nerve section and stimulation on, 40.
 —, following chemical administrations, 41.
 —, of fishes in relation to environment, 56, 84.
 —, oxidation-reduction potentials in regulation of, 56.
 —, peripheral and central chemical control of, 103.
 —, registration of, in frog, 17.
- Respiratory and cardiac rhythms**, 80.
 —, impulses mediated by stellate ganglia, 27.
 —, metabolism and pulmonary ventilation in tuberculosis, 73.
 —, —, during premortal rise in nitrogen excretion, 27.
 —, —, effect of glucose feeding on, 95.
 —, —, effect of high frequency current on, 194.
 —, —, effect of stimulation of sympathetic trunk on, 49.
 —, quotient in relation to eating, 48.
 —, —, of the brain, 446.
 —, —, of working isolated muscles, 39.
- Retina**, dark adaptation of different areas of, 52.
- REYNOLDS**, S. R. M. and W. M. **ALLEN**. The action of corpus luteum extracts containing progesterin on uterine motility in the unanesthetized rabbit, 86.
- REZNIKOFF**, P. and R. **FULLARTON**. The action of benzol on granulocytes, 87.
- RICHARDSON**, H. B. See **SHORR**, **LOEBEL** and **RICHARDSON**, 92.
- RICHTER**, O. See **IVY**, **RICHTER** and **KIM**, 59.
- RICHTER**, C. P. and M. **HINES**. Experimental production of the grasp reflex in adult monkeys by lesions of the frontal lobes, 87.
- RIDDLE**, O., T. C. **NUSSMANN** and F. G. **BENEDICT**. Metabolism during growth in a common pigeon, 251.

- RIDDLE, O., G. C. SMITH and F. G. BENEDICT. Seasonal, endocrine and temperature factors which determine percentage metabolism change per degree of temperature change, 88.
- , —, —. The basal metabolism of the mourning dove and some of its hybrids, 260.
- RIEDMAN, S. R. The effect of a ketogenic diet on convulsions of experimental origin in cats, 89.
- RIEGEL, C. See RAVDIN, JOHNSTON, RIEGEL, AUSTIN and WRIGHT, 86.
- ROBERTS, G. M. See CRANDALL and ROBERTS, 24.
- ROSENBLUETH, A. The mode of action of adrenin, 89.
- , —. The mode of action of adrenin and the quantitation of adrenin by biological methods, 149.
- ROWE, A. W., A. J. PLUMMER and M. MCMAHON. The metabolism of levulose: I. Some general considerations on provocative levulosuria, 90.
- ROWLAND, A. F. See CRILE, GLASSER, TELKES and ROWLAND, 26.
- SACKS, J., A. C. IVY, J. P. BURGESS and J. E. VANDOLAH. Histamine as the hormone for gastric secretion, 331.
- SAPHIR, O. See SOSKIN and SAPHIR, 573.
- SAUL, L. J. See DAVIS and SAUL, 28.
- SCHLOSSBERG, T. Simultaneous internal and external stimulation of the iris by adrenin, 90.
- SCHMIDT, C. F. Carotid sinus reflexes and the chemical regulation of respiration, 91.
- SCHMITT, F. O. The oxygen consumption of stimulated nerve, 91.
- and P. A. NICOLL. The effect of cyanide upon the contracture of smooth muscle, 91.
- SCHUTZ, W. J. See SOSKIN, PRIEST and SCHUTZ, 95.
- SCOTT, F. H. See COLLINS and SCOTT, 21.
- SEAGER, L. D. See FRANKE and SEAGER, 35.
- Seminal tract, chemical relations of fluids in, 58.
- SEVERINGHAUS, A. E. The effect of castration in the guinea pig upon the sex-maturing potency of the anterior pituitary, 309.
- SHAFFER, M. See CHANG, GERARD and SHAFFER, 19.
- SHANNON, J. A., N. JOLLIFFE and H. W. SMITH. IV. The effect of maintenance diet, feeding, etc., upon the quantity of glomerular filtrate, 625.
- , —. See JOLLIFFE, SHANNON and SMITH, 639.
- Shock, anaphylactic, effect of anaphylatoxin in, 29.
- SHORR, E., R. O. LOEBEL and H. B. RICHARDSON. The lactic acid cycle in the excised skeletal muscle of the diabetic dog, 92.
- , —. See CATTELL and SHORR, 18.
- SILVETTE, H. Some effects produced in vitro by cortico-adrenal extract, 94.
- and S. W. BRITTON. Carbohydrate changes in emotion, exercise and exposure to cold, 94.
- , —. See BRITTON and SILVETTE, 13.
- Skin of frog, electric potential of, 10.
- SKINNER, J. T., E. VAN DONK and H. STEENBOCK. Manganese as a factor in reproduction, 591.
- SMITH, A. H. See SWANSON and SMITH, 98.
- SMITH, G. C. See RIDDLE, SMITH and BENEDICT, 88, 260.
- SMITH, H. W. See JOLLIFFE, SHANNON and SMITH, 639.
- , —. See SHANNON, JOLLIFFE and SMITH, 625.
- SMITH, P. W. The quantitative relation between concentration of iodoacetic acid and rate of lactate accumulation in minced muscle, 94.
- SNODGRASS, J. See STEVENS, KARRER and SNODGRASS, 97.
- SOSKIN, S. and O. SAPHIR. The prevention of hypertrophy and the limitation of normal pulsation and expansion of the kidney by means of casts, 573.

- SOSKIN, S., W. S. PRIEST and W. J. SCHUTZ. The influence of epinephrin upon the exchange of sugar between blood and muscle, 95.
- SPENCER, H. J. and W. S. McCLELLAN. The influence of the previous diet on the respiratory metabolism following glucose meals, 95.
- SPIEGEL, E. A. The pyramidal and the extrapyramidal part of the centers of the autonomic system, 96.
- Spleen, reaction of, to specific gravity of blood, 79.
- , rôle of, in iron metabolism, 102.
- STAVRAKY, G. W. See BABKIN, STAVRAKY and ALLEY, 2.
- STEENBOCK, H. See SKINNER, VAN DONK and STEENBOCK, 591.
- STELLA, G. See BRONK and STELLA, 14.
- STEVENS, H. C., E. KARRER and J. SNODGRASS. The tension-length relation of striated muscle, 97.
- STEWART, J. F. and W. N. BOLDYREFF. Factors influencing the passage of liquids from the stomach into the intestine, 96.
- , See BOLDYREFF and STEWART, 11.
- STEWART, L. See KELLER and STEWART, 64.
- STICKELS, A. E. See MACHT, DUNNING and STICKELS, 70.
- Stomach, CO₂ content of mucosa of, 58.
- , effect of anoxemia on evacuation of, 26.
- , factors influencing evacuation of, 96.
- , formation of HCl and NaCl in, 8.
- , motility, influence of sciatic and vagus on, 82.
- , secretion, effect of liver extract on, 59.
- , —, in, influenced by duodenum, 25.
- Sucrose, intravenous injection of, in man, 63.
- Suprarenal insufficiency, 282, 662.
- SUTHERLAND, G. F. and S. DWORKIN. Conditioned responses to sound and vibrations, 97.
- SUZMAN, M. M., G. L. MULLER and C. C. UNGLEY. An attempt to produce spinal cord degeneration in dogs fed a high cereal diet deficient in vitamin A. The incidental development of a syndrome of anemia, skin lesions, anorexia and changes in the concentration of blood lipoids, 529.
- SWANSON, P. P. and A. H. SMITH. The effect on the albino rat of a ration deficient in inorganic constituents in which edestin serves as the source of protein, 98.
- Sweat, secretion of magnesium in, 17.
- Sympathectomy, effect on blood flow, 213.
- Sympathetic, para-, fibers in vagus, 274.
- Synergism and antagonism of drugs, 65.
- T**ALBERT, G. A. See CARPENTER and TALBERT, 17.
- TATELBAUM, A. J. See GOLDSTEIN, TATELBAUM, EHRE and MURLIN, 166.
- TAYLOR, A. B. See BOELL and TAYLOR, 10.
- TAYLOR, N. B. and C. B. WELD. Observations upon calcium absorption, 99.
- TELKES, M. See CRILE, GLASSER, TELKES and ROWLAND, 26.
- Temperature of body in high frequency electrostatic field, 75.
- TEMPLETON, R. D. and H. LAWSON. Studies in the motor activity of the large intestine. IV. Response to autonomic drugs, 511.
- Thirst, physiological mechanism of, 44.
- THOMAS, C. I. See RAY and THOMAS, 86.
- THOMAS, J. E. See CRIDER and THOMAS, 25.
- Thyroglobulin, physiological activity of iodine in, 583.
- Thyroid feeding and gastro-intestinal motility, 598, 605.
- , hormone, fate of, in experimental hyperthyroidism, 75.
- , hyper-, excretion of iodine in, 4.
- Tissue ash, catalytic activity of, 82.
- Tissues, diffusion of CO₂ through, 104.

- Toad poisons found in different species, 20.
- TUM SUDEN, C. See WYMAN and TUM SUDEN, 105, 282, 662.
- UNGLEY, C. C. See SUZMAN, MUL-
LER and UNGLEY, 529.
- Urea, passage between blood and intestinal lumen, 391.
- Urine, albumen in, following exercise, 357, 365.
- excretion in dog, 625, 639.
- of rats, sex hormone in, 246.
- , pregnancy, effect of intrafollicular injection of, 482.
- VAGUS, accelerator fibers in, 274.
- VANDOLAH, J. E. See SACKS, IVY, BURGESS and VANDOLAH, 331.
- VAN DONK, E. See SKINNER, VAN DONK and STEENBOCK, 591.
- VAN LIERE, E. J. and G. CRISLER. The action of the vagus on the heart in acute anoxemia with further observations on the question of cardiac tonus, 100.
- See CRISLER and VAN LIERE, 26.
- VERDA, D. J., O. S. ORTH and W. E. BURGE. The effect of ultra-violet radiation on the pressor action of nicotine, 100.
- Ventricular fibrillation, relation of electric countershock to, 65.
- Viscero-cardiac reflexes, electrocardiographic study of, 26.
- VISSCHER, M. B. and R. C. INGRAHAM. On the establishment of a membrane equilibrium in the dynamic ultra-filtration process, 101.
- Vitamin A, effects of diet deficient in, 529.
- B requirements, 115.
- Vitamins, physiology of, 115.
- WAKEFIELD, E. G. See KEITH, WAKEFIELD and POWER, 63.
- WALD, G. See HECHT, WALD and HAIG, 52.
- WALSH, E. L. Contraction and evacuation of the gall bladder of the rabbit produced by cholecystokinin, 101.
- WARDLAW, H. C. H. See DAGGS and WARDLAW, 27.
- Water balance in blood and tissues, 1.
- WEED, L. H. and L. B. FLEXNER. Cerebrospinal elasticity in the cat and macaque, 668.
- See FLEXNER, CLARK and WEED, 292.
- WELD, C. B. See TAYLOR and WELD, 99.
- WELLS, H. S. Some criteria of accuracy for the measurement of the osmotic pressure of colloids in biological fluids, 409.
- The concentration and osmotic pressure of the proteins in blood serum and in lymph from the lacteals of dogs, 421.
- The osmotic pressure of the colloids of lymph from the lacteals as a measure of the absorbing force of the intestine, 101.
- The passage of materials through the intestinal wall. II. The osmotic pressure of the colloids of lymph from the lacteals as a measure of the absorbing force of the intestine, 434.
- WEST, F. E. See PENDLETON and WEST, 391.
- WHITE, H. L. The molecular concentration of glomerular fluid, 102.
- WILSON, E. D. and E. B. KRUMBHAAR. The rôle of the spleen in iron metabolism, 102.
- WILSON, M. J. See IRVING and WILSON, 58.
- WINDER, C. V., H. OWEN and R. GESELL. Peripheral and central chemical control of respiration, 103.
- WINTERS, H. See FLEXNER and WINTERS, 697.
- Work, albuminuria and, 365.
- WRIGHT, C. I. The diffusion of carbon dioxide through tissues, 104.
- WRIGHT, S. See RAYDIN, JOHNSTON, RIEGEL, AUSTIN and WRIGHT, 86.
- WYMAN, L. C. and C. TUM SUDEN. Reversal of the vascular response to

- a small dose of adrenalin in the rat,
105.
- WYMAN, L. C. and C. TUM SUDEN.
Studies on suprarenal insufficiency.
X. Depressor responses to small
doses of adrenalin in the rat, induced
by loss of the suprarenal medulla,
282.
- . Studies on suprarenal
insufficiency. XI. The growth of
transplanted cortical tissue in the
rat, 662.
- WYMAN, L. C. See LUTZ and WYMAN,
69.
- YATER, W. N. See MARKOWITZ,
YATER and BURROWS, 73.
- YOUNG, R. H. See CROMER and YOUNG,
27.

THE
AMERICAN JOURNAL
OF
PHYSIOLOGY

VOLUME CI

BALTIMORE, MD.
1932

F
C
S

F
T
C
S

CONTENTS

No. 1. JUNE, 1932

PROCEEDINGS OF THE AMERICAN PHYSIOLOGICAL SOCIETY.....	1
CHANGES IN THE BLOOD ASSOCIATED WITH FEVER INDUCED BY KILLED B. COLI. <i>M. Garcia Banus and Emanuel Ginsburg</i>	106
STUDIES IN THE PHYSIOLOGY OF VITAMINS. XVIII. MEASUREMENTS OF THE VITAMIN B REQUIREMENT IN SEVERAL SPECIES OF ANIMALS. <i>George R. Cow- gill. With the collaboration of H. J. Deuel, Jr., Arthur H. Smith, Benjamin H. Klotz and H. H. Beard</i>	115
DIRECT INTRA-ARTERIAL BLOOD-PRESSURE READINGS IN MAN. <i>William Dame- shek and Julius Loman</i>	140
THE MODE OF ACTION OF ADRENIN AND THE QUANTITATION OF ADRENIN BY BIO- LOGICAL METHODS. <i>Arturo Rosenblueth</i>	149
GLUCOSE TOLERANCE IN THE PHLORHIZINIZED DOG AS AFFECTED BY RENAL VESSEL LIGATION AND BY INSULIN. <i>I. A. Goldstein, A. J. Tatelbaum, S. Ehre and J. R. Murlin</i>	166
STUDIES ON THE POSSIBILITY OF GLUCONEOGENESIS FROM FAT. I. RESPONSE OF THE PHLORIDINIZED DOG TO INSULIN. <i>Estelle E. Hawley</i>	185
PHYSIOLOGICAL EFFECTS OF HIGH FREQUENCY CURRENT. II. FURTHER STUDIES ON RESPIRATORY METABOLISM OF ANESTHETIZED DOGS. <i>E. S. Nasset</i>	194
PHYSIOLOGICAL EFFECTS OF HIGH FREQUENCY CURRENT. III. THE CARBON DIOXIDE AND OXYGEN CONTENT AND CAPACITY AND THE CONCENTRATION OF BLOOD OF ANESTHETIZED DOGS. <i>E. S. Nasset</i>	203

No. 2. JULY, 1932

THE EFFECT OF LUMBAR SYMPATHECTOMY ON THE FLOW OF BLOOD IN THE FEMORAL ARTERY OF THE DOG. <i>J. F. Herrick, Hiram E. Essex and Edward J. Baldes</i>	213
THE MALE HORMONE. V. THE EFFECT OF THE MALE HORMONE AND THE ANTERIOR PITUITARY. <i>Casimir Funk and Benjamin Harrow</i>	218
FACTORS WHICH INFLUENCE THE FLOW AND PROTEIN CONTENT OF SUBCUTANEOUS LYMPH IN THE DOG. I. HEMORRHAGE AND HYPEREMIA. <i>Florence W. Haynes</i>	223
FURTHER OBSERVATIONS ON THE RAPIDITY OF PASSAGE OF SUBSTANCES FROM BLOOD TO LYMPH IN THE DOG. <i>Florence W. Haynes</i>	232
THE ACCUMULATION OF LACTIC ACID IN EXCISED LIVER TISSUE. <i>John Haldi</i>	236
PREVENTION OF "CASTRATION CELLS" IN THE ANTERIOR PITUITARY OF THE MALE RAT BY ADMINISTRATION OF THE MALE SEX HORMONE. <i>John D. Reese and Morvynth McQueen-Williams</i>	239
THE ANTERIOR PITUITARY SEX HORMONE IN THE BLOOD AND URINE OF RATS. <i>Frederick E. Emery</i>	246
METABOLISM DURING GROWTH IN A COMMON PIGEON. <i>Oscar Riddle, Theodora C. Nussmann and Francis G. Benedict</i>	251
THE BASAL METABOLISM OF THE MOURNING DOVE AND SOME OF ITS HYBRIDS. <i>Oscar Riddle, Guinevere C. Smith and Francis G. Benedict</i>	260

THE PHYSIOLOGIC ACTION OF DEHYDROCHOLIC ACID. <i>J. F. Regan and O. H. Horrall</i>	268
DEMONSTRATION OF THE ACCELERATOR NERVE AND OF POSTGANGLIONIC PARASYMPATHETIC FIBERS IN THE VAGO-SYMPATHETIC TRUNK OF THE DOG. <i>Lawrence O. Morgan and Philip P. Goland</i>	274
STUDIES ON SUPRARENAL INSUFFICIENCY. X. DEPRESSOR RESPONSES TO SMALL DOSES OF ADRENALIN IN THE RAT, INDUCED BY LOSS OF THE SUPRARENAL MEDULLA. <i>Leland C. Wyman and Caroline tum Suden</i>	282
THE ELASTICITY OF THE DURAL SAC AND ITS CONTENTS. <i>Louis B. Flezner, Janet H. Clark and Lewis H. Weed</i>	292
OBSERVATIONS ON THE CIRCULATION IN THE FETAL ALBINO RAT. <i>E. L. Corey</i>	304
THE EFFECT OF CASTRATION IN THE GUINEA PIG UPON THE SEX MATURING POTENCY OF THE ANTERIOR PITUITARY. <i>Aura Edward Severinghaus</i>	309
THE END OF THE SPIKE POTENTIAL OF NERVE AND ITS RELATION TO THE BEGINNING OF THE AFTER-POTENTIAL. <i>Herbert S. Gasser and Helen Tredway Graham</i>	316
HISTAMINE AS THE HORMONE FOR GASTRIC SECRETION. <i>J. Sacks, A. C. Ivy, J. P. Burgess and J. E. Vandolah</i>	331
FATIGUE IN SKELETAL MUSCLE IN RELATION TO THE FREQUENCY OF STIMULATION. <i>Hallowell Davis and Pauline A. Davis</i>	339
STUDIES ON ALBUMINURIA FOLLOWING EXERCISE. I. ITS INCIDENCE IN WOMEN AND ITS RELATIONSHIP TO THE NEGATIVE PHASE IN PULSE PRESSURE. <i>Frances A. Hellebrandt</i>	357
STUDIES ON ALBUMINURIA FOLLOWING EXERCISE. II. ITS RELATIONSHIP TO THE SPEED OF DOING WORK. <i>Frances A. Hellebrandt, Elizabeth Brogdon and L. E. A. Kelso</i>	365
HEMODYNAMICS OF ARTERIOSCLEROSIS. INFLUENCE OF CHANGE OF COEFFICIENT OF VOLUME ELASTICITY ON CIRCULATION. <i>George Fahr, Jay Davis, Arthur Kerkhof, Philip Hallock and Ellis Giere</i>	376
THE PASSAGE OF UREA BETWEEN THE BLOOD AND THE LUMEN OF THE SMALL INTESTINE. <i>Walter R. Pendleton and Francis E. West</i>	391
A NOTE ON THE RELATIONSHIP OF CEREBROSPINAL AND INTRALABYRINTHINE PRESSURES. <i>Walter Hughson</i>	396

No. 3. AUGUST, 1932

SOME CRITERIA OF ACCURACY FOR THE MEASUREMENT OF THE OSMOTIC PRESSURE OF COLLOIDS IN BIOLOGICAL FLUIDS. <i>Herbert S. Wells</i>	409
THE CONCENTRATION AND OSMOTIC PRESSURE OF THE PROTEINS IN BLOOD SERUM AND IN LYMPH FROM THE LACTEALS OF DOGS. <i>Herbert S. Wells</i>	421
THE PASSAGE OF MATERIALS THROUGH THE INTESTINAL WALL. II. THE OSMOTIC PRESSURE OF THE COLLOIDS OF LYMPH FROM THE LACTEALS AS A MEASURE OF THE ABSORBING FORCE OF THE INTESTINE. <i>Herbert S. Wells</i> ...	434
THE RESPIRATORY QUOTIENT OF THE BRAIN. <i>H. E. Himwich and L. H. Nahum</i> ...	446
STUDIES ON MAGNESIUM DEFICIENCY IN ANIMALS. II. SPECIES VARIATION IN SYMPTOMATOLOGY OF MAGNESIUM DEPRIVATION. <i>Elsa R. Orent, H. D. Kruse and E. V. McCollum</i>	454
GLYCOGENOLYTIC EFFECT OF EPINEPHRINE ON SKELETAL MUSCLE. <i>S. G. Major and Frank C. Mann</i>	462
INHIBITION OF LACTIC ACID FORMATION IN BRAIN AND KIDNEY TISSUE PRODUCED BY INTRAVENOUS INJECTION OF SODIUM MONOiodoacetate. <i>John Haldi</i>	469

A METHOD FOR MEASURING ELASTICITY IN VIVO AND RESULTS OBTAINED ON THE EYEBALL AT DIFFERENT INTRAOCULAR PRESSURES. <i>Janet H. Clark</i>	474
THE PRODUCTION OF FUNCTIONAL CORPORA LUTEA BY THE DIRECT INTRAFOLLICULAR INJECTION OF EXTRACTS OF PREGNANCY URINE. <i>Maurice H. Friedman</i>	482
CIRCULATORY ADJUSTMENTS TO MODERATE EXERCISE IN NORMAL INDIVIDUALS, WITH PARTICULAR REFERENCE TO THE INTERRELATION BETWEEN THE VELOCITY AND VOLUME OF THE BLOOD FLOW. <i>Laurence B. Ellis</i>	494
FACTORS INFLUENCING ANEMIA DEVELOPMENT IN YOUNG RATS. <i>Helen S. Mitchell</i>	503
STUDIES IN THE MOTOR ACTIVITY OF THE LARGE INTESTINE. IV. RESPONSE TO AUTONOMIC DRUGS. <i>R. D. Templeton and Hampden Lawson</i>	511
AN ATTEMPT TO PRODUCE SPINAL CORD DEGENERATION IN DOGS FED A HIGH CEREAL DIET DEFICIENT IN VITAMIN A. THE INCIDENTAL DEVELOPMENT OF A SYNDROME OF ANEMIA, SKIN LESIONS, ANOREXIA AND CHANGES IN THE CONCENTRATION OF BLOOD LIPOIDS. <i>M. M. Suzman, Gulli Lindh Muller and C. C. Ungley</i>	529
STUDIES ON INDUCTION OF OVULATION AND THE INHIBITORY INFLUENCE OF CORPORA LUTEA ON OVULATION IN THE RABBIT. <i>John J. Jares</i>	545
ON THE EFFECTS OF POLARIZATION OF NERVE FIBERS BY EXTRINSIC ACTION POTENTIALS. <i>E. A. Blair and Joseph Erlanger</i>	559
THE RELATIVE ADSORPTION RATES OF DEXTROSE AND LEVULOSE. <i>G. E. Burget, Philip Moore and Robert Lloyd</i>	565
IS LEVULOSE CONVERTED TO DEXTROSE IN THE PROCESS OF ABSORPTION FROM THE INTESTINE? <i>G. E. Burget, Philip Moore and Robert Lloyd</i>	570

No. 4. SEPTEMBER, 1932

THE PREVENTION OF HYPERTROPHY AND THE LIMITATION OF NORMAL PULSATION AND EXPANSION OF THE KIDNEY BY MEANS OF CASTS. <i>Samuel Soskin and Otto Saphir</i>	573
THE PHYSIOLOGICAL ACTIVITY OF IODINE IN THYROGLOBULIN. <i>Broda Otto Barnes</i>	583
MANGANESE AS A FACTOR IN REPRODUCTION. <i>J. T. Skinner, Evelyn Van Donk and H. Steenbock</i>	591
I. THE EFFECT OF EXPERIMENTAL HYPERTHYROIDISM ON GASTRO-INTESTINAL MOTILITY. <i>Dorothy Fetter and A. J. Carlson</i>	598
II. THE EFFECT OF INDUCED HYPERTHYROIDISM ON THE GASTRO-INTESTINAL MOTILITY OF VAGOTOMIZED DOGS. <i>Dorothy Fetter, Louis Barron and A. J. Carlson</i>	605
FACTORS WHICH INFLUENCE THE FLOW AND PROTEIN CONTENT OF SUBCUTANEOUS LYMPH IN THE DOG. II. THE EFFECT OF CERTAIN SUBSTANCES WHICH ALTER THE CAPILLARY CIRCULATION. <i>Florence W. Haynes</i>	612
GLYCOGENESIS IN THE TOTALLY PHLORHIZINIZED ORGANISM. <i>S. G. Major</i>	621
IV. THE EFFECT OF MAINTENANCE DIET FEEDING, ETC., UPON THE QUANTITY OF GLOMERULAR FILTRATE. <i>James A. Shannon, Norman Jolliffe and Homer W. Smith</i>	625
THE EXCRETION OF URINE IN THE DOG. V. THE EFFECTS OF XYLOSE AND SUCROSE UPON THE GLOMERULAR AND UREA CLEARANCES. <i>Norman Jolliffe, James A. Shannon and Homer W. Smith</i>	639
THE CHEMICAL CONTROL OF BREATHING, AS SHOWN IN THE ACID BASE BALANCE OF THE BLOOD, UNDER PROGRESSIVE DECREASE OF OXYGEN. <i>Yandell Henderson and Ellen M. Radloff</i>	647

STUDIES ON SUPRARENAL INSUFFICIENCY. XI. THE GROWTH OF TRANSPLANTED CORTICAL TISSUE IN THE RAT. <i>Leland C. Wyman and Caroline tum Suden</i> . .	662
CEREBROSPINAL ELASTICITY IN THE CAT AND MACAQUE. <i>Lewis H. Weed and Louis B. Flezner</i>	668
ACTION POTENTIALS FROM SINGLE MUSCLE FIBERS. <i>S. Gelfan and G. H. Bishop</i> .	678
THE BLUE EXCITATION CURVE OF DICHROMATS. <i>Ellis Freeman and W. F. Hamilton</i>	686
CATALEPSY CAUSED BY LESIONS BETWEEN THE MAMMILLARY BODIES AND THIRD NERVE IN THE CAT. <i>S. W. Ranson and W. R. Ingram</i>	690
THE RATE OF FORMATION OF CEREBROSPINAL FLUID IN ETHERIZED CATS. <i>Louis B. Flezner and H. Winters</i>	697
EFFECT OF POSTERIOR PITUITARY EXTRACTS ON THE CONSTITUENTS OF THE BLOOD. <i>H. E. Himwich, F. W. Haynes and J. F. Pazikas</i>	711
INDEX	715